MEETING MINUTES
Restoration Advisory Board
May 19, 2005
South Memphis Senior Citizens Center
1620 Marjorie Street
Memphis, Tennessee

The Restoration Advisory Board (RAB) meeting was held at 6:00 p.m. on May 19, 2005, at the South Memphis Senior Citizens Center located at 1620 Marjorie Street, Memphis, Tennessee. The attendance list is attached.

WELCOME AND INTRODUCTION

MR. DOBBS: On behalf of the Defense Logistics Agency (DLA), I would like to welcome you to this evening's Restoration Advisory Board meeting.

RECENT DEPOT NEWS COVERAGE

MR. DOBBS: As we get started tonight, I would like to turn it over to Turpin Ballard to talk about the recent news coverage that was in the paper on or about May 12th concerning the toxic concerns of the former BRAC (Base Realignment and Closure) site. So, Turpin?

MR. BALLARD: Yes. I wanted to talk a little bit about that, because one of my responsibilities as EPA (Environmental Protection Agency) Project Manager for DDMT (Defense Depot Memphis, Tennessee) is to maintain current information about the site in our Superfund database. This includes schedules planned and actual milestones, cleanup information and site status.

One status field in the database deals with two environmental indicators. The first environmental indicator is called "human exposure control," quote/unquote, and the second is called "contaminated groundwater migration control," quote/unquote. These two are site-wide criteria, and there's only one entry we can put in there. Well, the only entries that we can put in there are "yes, no" or "there's insufficient data to make a call."

The General Accounting Office (GAO), which is the investigating arm of Congress, published a report last winter, which used these two environmental indicators, the human exposure and migration indicators -- groundwater

migration indicators. They use these as a broad-bush way of accessing progress in cleaning up sites on the National Priorities List (NPL).

Unfortunately, I had not updated the environmental indicator field on the database, which resulted in the GAO reporting that there is uncontrolled human exposure at the Depot, uncontrolled human exposure to environmental contamination.

I became aware of this in April after the report came out, and, headquarters looked at it and, you know, sent sort of a query down to the regions stating, "If you haven't updated your environmental indicator fields, please do so to make sure that either this information in the report is correct or if it's not correct, let's get the database updated."

So I updated that field in April. The report was out, and I had already made the appropriate changes. And what the database now reflects is that we don't have uncontrolled human exposure at DDMT.

Recent media stories originated from the GAO report, and so the stories don't represent the current conditions at the Depot, the current conditions that prevail now as a result of the assessment and cleanup acts that we've done.

So I would like to apologize to the community for any undue concern caused by these stories that resulted from my inattention to this aspect of my administrative responsibilities. But I just still want to assure everyone that contrary to what's been reported in the press, it was an administrative error on my part, which resulted in this whole misunderstanding.

MR. WILLIAMS: One more quick thing. One quick thing. Will you be submitting something in the newspaper to sort of do an adjustment to what, you know, has already been printed or to give a better view of what's going on with the Depot?

MR. BALLARD: I will have to talk to our public affairs folk about it. I was interviewed by Channel 3 last Friday, and the results of that reported at 6:00 p.m. on Channel 3 last Friday. So the story, you know, was intended to clear or correct the situation.

MR. WILLIAMS: Well, you know, just knowing how things go, nobody don't want to say anything good. It's always the last thing to make the news. So sometimes I guess we might have to

take that second step to make sure that we put everybody at ease. Mr. Tyler.

MS. MOORE: Can I just interject on that? Let me just clarify that there were two television stations reporting, WMC TV, and I have the tape of the coverage of those six-second segments. And it's very clear, especially noticeable that Channel 5 took a negative approach. Channel 5 didn't do any additional research at all. So they reported that initial finding.

However, Channel 3 corrected it, and they were proud to say, "Contrary to other reports, it was old data." So it has been corrected. So it was not printed. It was television. So Channel 3 did correct it. So I would think that report was corrected.

MR. WILLIAMS: Okay. Mr. Tyler.

MR. TYLER: Stanley Tyler. Two questions. Also it said that the price to clean up the Depot was going to be $26 million dollars, and the date that the Depot was going to be cleaned was by the year 2010. Those additional facts, would you elaborate on that? Because we don't know what it's going to cost or what year we're going to clean the Depot up or where those facts, figures and money figures come from. Because I heard those distinctively: $26 million dollars, 2010.

MR. WILLIAMS: But he was saying it's updated. So you want to know the updated information?

MR. TYLER: Right.

MR. DOBBS: Mike Dobbs. The $26 million dollars is our current cost estimate that we have to date, the cost to clean and remediate the site. We usually put it in a form -- a formulation called RACER. We do that on the contractor, and we looked at their current projections or expectations of $26 million, and that's over the long term, including long-term monitoring, et cetera.

The date of 2010 is the date that we look at when our remedies are going to be in place, we achieve what we call "operating properly and successfully," the property being transferred over. That doesn't mean the remedy will be cleaned up. There is a period beyond that.

MS. PETERS: Johnnie Mae Peters. How do you make this kind of mistake? How did this happen with all the data that they've been doing for the last year, ever since they closed it? Would you change some of -- or looking at something wrong or something?

MR. BALLARD: What it is, Ms. Peters, is I didn't change something. As I said, that part of the database that the General Accounting Office used to base its report on -- you know, it's a small part of a very large database. I had not updated it since we got our first Record of Decision back in 2001. And before that I think it had indicated that we didn't have all the human exposures controlled because we had things like the cleanup at the housing area to do and the cleanup in the southwest corner that hadn't been completed yet. But after those were completed and we had the land institutional controls in place and had done all the excavations that were needed on the Main Installation, I could have changed and should have changed the database at that time to indicate that human exposure to contamination was controlled.

It doesn't mean that there's no exposure. It just means that we don't have uncontrolled exposure. So, like I said, the General Accounting Office just took a data poll from our database and used that as a basis for their report, assuming that everything was current. It was an administrative error on my part not to have that updated.

MS. PETERS: The reason I ask is because the newspaper made it sound like -- or wherever I read it or seen it made it sound like the Depot was the worst place in the nation. All this water over here, and people already been complaining, saying, you know, something in the water, the water doing this and the water doing that and stuff, and then for them to read this in the paper, they had it made.

MR. BALLARD: I can't speak to how the paper is going to spin a government report. It started out with an Associated Press report which got on the news wires, and, you know, it went forward from there. But I just want to say that the actual conditions at the site are very much different than what is suggested by all these reports.

MR. WILLIAMS: We understand, and we accept your apology, and we're going to move on along with the agenda.

REVIEW AND APPROVE MAY AGENDA - REVIEW AND APPROVE OCTOBER MEETING MINUTES

MR. WILLIAMS: At this time I wanted to approve the agenda for today, which is May 19th, and I wanted to approve the October minutes for that meeting. But seeing that we do not have enough members here for a quorum, we're going to table that until later on. If anyone comes in, then we'll go ahead on.

OLD BUSINESS - COMMUNITY RAB HOUSEKEEPING ISSUES

MR. WILLIAMS: So we'll move on without the agenda to the Old Business, community RAB housekeeping issues. Anybody have anything on that? Mr. Tyler.

MR. TYLER: Stanley Tyler. One thing I was concerned about when this story broke is that EPA didn't make it clear that the contamination levels at the Depot were below EPA guidelines for a normal area here in the city. Because when people see the Superfund site -- which this is a Superfund site, that's correct; right? So there were contaminants at a higher level than normal. That's why it was put on the Superfund site. (sic-National Priorities List)

So, what I was saying was why not correct this? The contaminants are being controlled, and they are below EPA guidelines. Is that a true statement?

MR. BALLARD: Yes.

MR. TYLER: And sometimes in the community, you know, you need to use those lay terms so people's fears can be put to rest. Because you don't make Superfund unless there is something wrong. You know, so let's just be clear about that. But the problem is being straightened out, and hopefully we can assure the public that it's going to get most of the contaminants, but it's not going to be contaminant free. You know, it will be below EPA guidelines but you still can function. Is that not correct?

MR. BALLARD: When the cleanup is complete, especially considering the groundwater -- for just daily exposure to what's at the surface on the soil for the uses that the Depot is going under with, you know, industrial use, recreational use, that sort of thing, it's okay now. We still have contaminated groundwater that we're going to be hearing some more about in just a little bit, the actions that we're going to be taking here soon to start cleaning that up. Well, we've already started, but to continue with that cleanup.

MR. WILLIAMS: Is there any more comments?

NEW BUSINESS - ENVIRONMENTAL PROGRAM UPDATE

MR. WILLIAMS: Okay, right now we're going to go with New Business, Environmental Program Update. So I would like for everybody to hold their comments until the end of the presentation, and we're going to Mr. Tom Holmes.

MR. HOLMES: My name is Tom Holmes. I'm the Project Manager with MACTEC Engineering and Consulting, and I'm going to present the Environmental Restoration Program Update. These are the areas we're going to cover today: The Main Installation Remedial Action; the Early Implementation of the Selected Remedy; Finding of Suitability to Transfer, Number Four; Dunn Field Disposal Sites Remedial Action; and the Community Involvement Program. Then I'm going to go over the next steps and project schedule for both the Main Installation and Dunn Field. All of this information on the update portion is just an update on the information and the actions that have been discussed previously with the RAB.

The Main Installation Record of Decision was completed in September 2001. The Record of Decision selected enhanced bioremediation treatment using sodium lactate injections into the groundwater and natural attenuation. The Remedial Design was completed in July of 2004. The Remedial Action Work Plan is currently being developed and is near completion. The work plan includes the final injection and monitoring well locations, sodium lactate injection procedures, groundwater monitoring plan, and the work plan will be available in the Information Repositories once it's finalized.

The Remedial Action is currently scheduled to begin this winter, and we may try and move that up a little bit and get everything taken care of, but it will be by then. And a Health and Safety Plan addendum will be prepared prior to beginning the work. We are planning on having a public briefing on the Remedial Design, which is required prior to beginning a Remedial Action, and we're planning on doing that in July of this year.

This just shows the area of the treatments where the injections are going to take place: Treatment area one in the southwest corner of the Main Installation and treatment area two over in the southeast section. (Indicating)

Dunn Field, the Early Implementation of Selected Remedy-- this took place west of Dunn Field. We installed monitoring wells in the areas from June to December of last year. We sent out fact sheets during the -- or prior to the installation and met with the Gaslight Square residents during that visit.

Based on the results from the monitoring wells, we performed zero-valent iron injections into the fluvial aquifer, which is shown, through 14 borings. Prior to beginning the work, we presented this information and our plans to the RAB in the last meeting in October. The fieldwork occurred between November and January this year, and we had a public meeting at the request of the RAB from the October meeting. We had a public meeting to discuss ZVI (zero-valent iron) technology and its implementation or use at the Depot in February.

Post injection sampling of groundwater was performed in January and March of this year. Chlorinated solvents in the area of the remediation were reduced by 50 percent. We are going to continue groundwater monitoring, and the data from the injections -- from the zero-valent iron injections and the groundwater monitoring will be used in the Off-Depot Groundwater Remedial Design, which is in progress. And our Remedial Action Completion Report is being prepared. They will be reviewed by EPA and TDEC (Tennessee Department of Environment and Conservation) and will be available in the Information Repositories once it's finalized.

This shows the area of the injections. (Indicating) You've got a larger version of this figure in your handout I believe. It shows just a couple of things I wanted to point out. The wells in red were the ones that were installed from June of last year to December. Prior to this -- there were only a few wells in this area. This is the Depot, Dunn Field, the western boundary over here, the railroad tracks, Menager, Ragan and the MLGW (Memphis Light, Gas and Water) substation. The injections took place in this area here (Indicating). Those are in the borings that are labeled "IW."

The original wells that were in here, MW (monitoring well) 54, MW44, MW79, we had seen -- and as we explained in October, we had seen increasing concentrations of VOCs (volatile organic compounds) in MW54. We started with a few wells, and then as we got more information, we installed more, and at the end of this we were able to determine the extent of the contamination pretty well. And you can see the number of wells we had around here. (Indicating) This distance from here to here, from one end

of MLGW to the other is about 400 feet. So the wells are spaced pretty close together.

Groundwater flow in this area is very slow, about a tenth of a foot per day, and this will provide us time to monitor the results and determine whether the plume is moving or stable and its current configuration, where it ends basically in here (Indicating).

This entire area, the off-Depot area, will be addressed in the final remedies of the final Remedial Design in the off-Depot RD. (Indicating)

FOST No. 4 includes 41 acres on the eastern half of Dunn Field. We had a public comment period on the FOST in January and February of this year. The document was completed and signed in March. It was reviewed and approved by EPA and TDEC prior to completion, and the deeds for the land transfer to the City of Memphis are being prepared.

The next slide shows the area with north being up at this end (Indicating). Here is Hays Road, railroad tracks, Person Avenue and Dunn Avenue down here. So you can see it's a little more than half. Dunn Field is about 64 acres, and this is 41 acres.

The Disposal Sites Remedial Action - The Record of Decision for Dunn Field was completed in April of 2004. This Remedial Action was one of the selected remedies. The Remedial Design was completed in April of 2004. Prior to the completion, a Pre-Design Investigation to determine the disposal sites requiring remedial action was completed in October of 2003.

The Remedial Action Work Plan was completed in November of 2004, and a public briefing for the Disposal Sites Remedial Action was conducted in January of this year.

The Remedial Action began in March. It addressed five sites, five of the disposal sites: 3, 4.1, 10, 13 and 31. The Remedial Action includes excavation, confirmation and characterization sampling, transportation of the excavated materials, disposal, backfill of the sites and site restoration.

The next slide shows where the disposal sites that were excavated were. Of course, this was about the boundary of the transferred property you see on the west side of Dunn Field. The excavated materials were similar to those found during the Pre-Design Investigation. There were some discarded drums in site 4.1. There was construction debris in 10, 13 and 31, including some metal and glass. Site 3, however, had a number of one-quart bottles with clear liquid in it. The Pre-Design Investigation indicated that there were broken bottles in the area. We tested the liquid and found it was low pH water, basically, acidified water with orthotolidine, which is a compound used to test water for the presence of chlorine. It's got a number of other potential uses as well.

Historical records had described this site as a mixed chemical with orthotolidine, dihydrochloride. So the fact that we found some in the bottles was not totally surprising; we had established that, in fact, bottles were going to be present. Based on it being a mixed chemical site and the bottles and us not knowing for sure what was in it, we halted excavation in that area. While we were testing the bottles, we placed plastic sheeting over the bottles and put the dirt back on top, and we are preparing an addendum to the work plan now to go back down there and take care of that area. But we had to make this addendum to the work plan because we wanted to make sure that the workers who were going to be excavating it are safe, as are the residents in the community.

We've completed the originally planned excavation at sites 4.1, 13, 10 and 31. As in the plan, we took confirmation samples of the soil. We had some samples above the cleanup goals in sites -- in three of the sites: 4.1, 10 and 31. We didn't have any exceeding in 13. Where we exceeded the cleanup goals, we performed additional over-excavation and we have completed over-excavation in 4.1 and 31. Confirmation samples confirmed that remediation goals were met.

We did a couple rounds of over-excavation at Site 10, but it's going to require some additional excavation, and we have reached the limit of excavation we could conveniently perform at that time, and we are going to come back and complete the excavation of 10 at the same time as we do the work at Site 3 in late June or July of this year.

We have backfilled, graded and seeded all the excavations. So it's safe there. There weren't any open pits, and we marked the areas we're going to go back with plastic sheetings so we'll be able to get back to where we need to do continued excavation.

All the excavated materials met non-hazardous waste criteria and were disposed at South Shelby Landfill. Backfill was tested prior to being brought to Dunn Field and determined to be clean and was used in the backfill of the disposal sites.

Air monitoring for VOCs and dust was performed during the current excavation, as we described in the work plan, and there were no readings above action levels, and an RA (Remedial Action) Completion Report will be prepared after completing the excavation and conformation sampling at Sites 3 and 10. And upon being final, those reports will be provided to the RAB and be put in the Information Repositories.

The Community Involvement Plan -- the original Community Relation Plan was written in 1999. It's a five-year document. We began an update in the summer of 2004. We performed community interviews and some research that reflects the history of the Environmental and Community Relations Program at the Depot. The revised Community Involvement Plan was distributed to the RAB and placed in the IRs (Information Repositories) in February. The plan objectives from the Community Involvement Plan are listed below, and I've got some more information here just to indicate how we're trying to meet the objectives that we set in the plan.

To fulfill the information availability requirements, we have the Information Repositories; we have the Administrative Record online at the website you see listed there. (Indicating) To build community interest in the cleanup, we have RAB meetings, we have EnviroNews, and we're preparing a new edition of that to be sent out in July. We have public briefings. We've got one coming up in July, and we have fact sheets that we prepare, such as those for the ZVI work and for the wells that we've installed. We'll continue to send out fact sheets.
To build community awareness about community involvement opportunities, we have fact sheets, we have

media relations, news releases and such that we send out to newspapers and the press, which is the information Mr. Ballard sent out. The Depot also put out some information, questions and answers for the news channels.

And to maintain regular information channels, there is a Community Relations Specialist, Ms. Moore, who is available to answer questions; public briefings; the community information session; EnviroNews; fact sheets; information repositories, and the website. The website you see is listed here.

The Information Repositories--we have consolidated those into two locations: At the Depot Business Park and the Cherokee branch of the public library. The IRs have been used very infrequently, and we had closed the one at the Shelby County Health Department in March of this year. The CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) status now, we've discussed the six steps, phases in the CERCLA program. We have completed the first four for the entire Depot. The Remedial Design has been completed for two of the sites and is ongoing at two other portions of the site source areas and the off-Depot groundwater. And Remedial Action is underway at the disposal sites and has been set to begin soon at the Main Installation.

The next steps are: the summer of 2005 complete the Disposal Sites Remedial Action, conduct the Main Installation Remedial Design public briefing. In the winter we'll begin the Main Installation Remedial Action with Enhanced Bioremediation. We also will complete the Source Areas Remedial Design, which is to include soil vapor extraction and zero-valent iron injections. We'll complete the Disposal Sites Remedial Action Completion Report.
In 2006 we'll have the Source Areas RD (Remedial Design) public briefing and begin the Remedial Action, and we'll complete the Off-Depot Groundwater Remedial Design, which will include a permeable reactive barrier and ZVI injection and natural attenuation.

In 2007 we will conduct the Off-Depot Groundwater Remedial Design public briefing and begin the Remedial Action. In 2008 we expect to receive EPA operating

properly and successfully determination for the Main Installation and for the Main Installation Remedial Action. Operating properly and successfully, or OPS, means that the remediation was installed as planned in the design and the work plan; it is meeting the design specifications and the performance goals that will be defined. Once OPS is obtained for the Main Installation, we'll conduct FOST 5, which is the remainder of the Main Installation property. There will be a public comment period for that FOST. Then in 2009 we expect to receive OPS for the Source Areas and Off-Depot Groundwater RA actions at Dunn Field, and then to conduct FOST 6, which will be the remaining portion of Dunn Field and have a public comment period then.

And that is the end. I will be happy to try and answer any questions you might have.

MR. WILLIAMS: Well, I have one. Okay, you were saying that the city and county will soon hold the deed to the property?

MR. HOLMES: It's going to -- for FOST 4 to the city or I guess city and county, but I'm not sure how it works.

MR. WILLIAMS: City and county. Okay, so I know that the Army -- I mean, the city and county holds a master lease to the property, and the Army was supposed to come in a five-year period and do an inspection of the land and to make sure that the city and county was meeting the criteria, the safety measures and everything for the property before they would turn it over to the city and county.

So my question is has the city and county met all the requirements for the Army to now be ready to deed the property to the city and county?

MR. HOLMES: I think those are two different properties. The lease is to the Depot Redevelopment Corporation for the Main Installation.

MR. WILLIAMS: Right.

MR. HOLMES: The property we're talking about transferring now is on Dunn Field. It's going directly from the Army to the city. The FOST was prepared to show that everything is done to transfer the property to the city.

So when the transfer goes through, there is no further inspection required for the transfer of FOST 4. There will be additional -- there will be, as I said, FOST 5 that will transfer the remainder of the property on the Main Installation.

FOST 3, which was completed in 2004, is the transfer of the deed that is also being prepared. That includes the golf course on the Main Installation and most of the warehouse facilities on the Main Installation. FOST 3 described everything that needed to be done for that and that all the requirements have been met.

MR. WILLIAMS: So you're saying that the property that's being transferred on Dunn Field meets EPA standards?

MR. HOLMES: Yes. That's the purpose.

MR. BALLARD: Yes and that was a finding in the Record of Decision ---

MR. WILLIAMS: Okay.

MR. BALLARD: --- that the area that was found suitable for transfer as a result of the Risk Assessment was an area where, you know, we didn't find any unacceptable levels of contamination.

MR. WILLIAMS: What would be unacceptable?

MR. BALLARD: You know, I can't give you a number because it depends on what the particular compound or element is. But we have toxicological criteria that are developed, and the whole Risk Assessment process was geared toward making a determination of whether there are unacceptable or acceptable risks. And, if so, where that is because that helps us to focus our cleanup.

I think you may be referring when you talk about "ongoing checking" is the inspection to ensure that the land-use controls haven't been violated, where if we say they're restricted from building housing or day care centers on the facility, because that wouldn't be a safe future use for those people, for residents, but that we want to make sure that those uses haven't occurred.

And those inspections have to go on about once a year, basically until such time as the Army can show that it's now safe and I don't know if that's ever going to happen. So there is ongoing monitoring of the, you know, use of the facility.

MR. WILLIAMS: Okay.

MS. MOORE: There is also a five-year review.

MR. WILLIAMS: Yes, every five years.

MS. MOORE: There are five-year reviews, and they are available for your review in the Information Repositories. They are done every five years.

MR. BALLARD: The next one is due in 2008.

MR. WILLIAMS: Okay. I've got one last question, and then I'll continue on.

Okay, you were showing us on Dunn Field the flow of the contamination on the outside of the property. Do you know how the flow of the contamination was?

MR. HOLMES: On the -- perhaps on the early implementation slide?

MR. WILLIAMS: Yes. You were saying that it was off site--which the flow of this was off site.

MR. HOLMES: Well, the VOCs are off site. Groundwater flow is basically to the west, through here, coming off of Dunn Field, and this is something that we've known and have talked about before. (Indicating)

MR. WILLIAMS: Right.

MR. HOLMES: On Dunn Field, this is the area of MLGW here, and this is where we put our boring. So you see the arrow shows the flow, go west here and then a little bit to the west -- northwest in here and coming towards the area from this part of the Depot, too. (Indicating)

MR. WILLIAMS: Okay, so, my main question was, we have not yet pinpointed exactly where this contamination is coming from. You've given me the flow of it. Now can we pinpoint where it's coming from?

MR. HOLMES: The wells we have indicate that the VOCs we were cleaning up with the early implementation in here may be coming from this area around MW73 on Dunn Field, and we don't see it in upgradient wells here (sic). So it's coming from this part of Dunn Field.

MR. WILLIAMS: So that means -- who owns that property?

MR. HOLMES: This is still the Army's property.

MR. WILLIAMS: Okay.

MR. HOLMES: It's coming from Dunn Field.

MR. WILLIAMS: Okay.

MR. HOLMES: There is other contamination coming from up here to the north that TDEC is looking into. There is also some contamination coming from the very north end here (Indicating), where the two sort of come together.
So there is some off-site contamination coming onto Dunn Field and then flowing back through Dunn Field. Whereas, the contamination starting on Dunn Field is going to the west, off of Dunn Field.

MR. WILLIAMS: Okay. Mr. Tyler?

MR. TYLER: Yes, sir. You said that Site 3 and 10 you unexpectedly hit something.

MR. HOLMES: Well, no, I wouldn't say we unexpectedly hit something. In Site 10, as we said, we had limits of the excavation that were originally planned, and that doesn't really show it. We had a square marked out that was in the Remedial Design that said based on all the information we had, the

trenching we did, the sampling we took that was reported in the Remedial Design, we think the contamination is within here (Indicating). So you go in here and you dig that up, and then you collect samples around the edge of that to determine if, in fact, we were correct.

Well, we did that. We dug that area up, collected those samples around the edge and at the bottom of the excavation, and in a couple of those samples -- and it varies some -- there was only one in the bottom or one on the wall or maybe just one on the wall where the samples had concentrations of copper and lead in a couple of sites. And in Site 31 it was PAHs (polyaromatic hydrocarbons), and they exceeded the remediation goals that were set and described in the ROD (Record of Decision) and then in the Remedial Design as well.

So, as we said we would do in the Remedial Action Work Plan, we dug further back into the wall or dug deeper at the base of the excavation, took another sample at that point. If the next sample was below the remediation goal, then we were done. If the sample wasn't above the remediation goal, we had to continue.

At Site 10 we were still above the remediation goal in our last sample, and we were in an area that we could tell was a burn pit, some soils were discolored. We could tell that that burn pit was a little bit larger than we had originally thought. So we said well, let's stop for now, get some new plans, come back out there and go ahead and take care of all of this. Because we had a lot of soil on site we needed to get off to take samples. So we just stopped. So we put plastic sheeting in the excavation, backfilled that so we know where to start, and we'll go back and get that.

Site 3, the historical records said there was orthotolidine in there and said that bottles of orthotolidine had been buried, but from the Pre-design Investigation we thought the bottles were broken and whatever was in there was gone, and we weren't really thinking we were going to get into a whole lot of bottles with liquid. When we dug it up, we saw a first view. We didn't think much of it, and then we took another shovel full and saw we still had a whole bunch of bottles, and we said, “Well, this isn't safe for our people. We think we know what's there, but we don't know for sure.” So we're going to stop. We're going to test these

bottles, see what's in there. We're going to step back and determine if we have enough protective equipment for our workers and whether it's going to be safe for the residents if we break something, if something is going to, you know, escape, there would be a release.

So we stopped. We put plastic sheeting back over the top, put some dirt back over the hole, took some of the bottles to the laboratory, did the tests and found that it had low Ph water with orthotolidine and then decided, well, okay, we think we know what we can do, but we're still going to have to have a higher level of protection for our people in the field. Because we were doing all of this basically in just a Tyvek so you don't get dirt on yourself, hardhats, and steel-toed boot sort of things with respirators available if we needed it.

We may go back and end up using supplied air. If we do, it's just to be safe. We're going to prepare a plan and submit it to the agency showing how we're going to do it. So I would say it's not -- it's a little bit -- in Site 3 we found something a little bit different than what we thought we would find, but it's not a major difference from what was said was out there.

So there was some difference. We stopped to be safe and to make sure we've got our plan set, and then we'll go back and finish the job.

MR. TYLER: What did the historical record say was there in Site 3 and 10?

MR. HOLMES: Site 10 actually -- I can't say that I remember off the top of my head what was there. Site 3 said it was a mixed chemical and orthotolidine burial, and that's basically all it said.

MR. TYLER: Just give an amount -- just said they buried one capsule or 50 or 1,000?

MR. HOLMES: No. I think once we did further looking, we said we found -- I think that there may be up to 3,000 one-quart bottles. At least that's what they said. We're not quite sure, but we have -- based on the excavation we did, we think we have an idea of the area of it. We found this at about four feet below the ground surface. I can't remember the exact size, and it's not like, you know, a football field size, but it's a small excavation size. Apparently it was excavated, and the bottles were put in. I guess they were put in carefully

enough that they didn't break. They were put in and dirt was put back on top of it.

MR. TYLER: One question about the repository. You closed it. What was the reason for closing the one at the health department? Just curious. I've been there.

MR. HOLMES: Well, we think we said in the Community Involvement Plan that we were going to reduce a number of IRs because it takes time and effort to get the documents to them and to make sure that they're kept up. From our records indication, there was very little use of any of them. I'm not saying they weren't ever used. But we do have all the information or most of the information at least on the website, on the Administrative Record website, and we still have two existing repositories. So the information is readily accessible to people. It just didn't seem to make sense to continue to have three sites.

MR. TYLER: One last question. The city's cutting a street in on that part of Dunn Field, and the contamination levels are, theoretically, below EPA's guidelines. So it's safe to cut a street in, but you wouldn't want to build a welcome center there; right?

MR. BALLARD: That portion of Dunn Field was released, you know, without restrictions because the Risk Assessment indicated that it was available for unrestricted use, that portion of Dunn Field. There's heavy contamination on the western part of Dunn Field, in the disposal areas, but there was no historical record of disposals in the eastern portion, and the results from our investigation confirmed that. So you could put a welcome center there.

MR. HOLMES: Also, there is no -- I mean, there's nothing on the surface. The contamination that's still present on the western side of Dunn Field -- and this is in the FOST -- isn't a hazard to the use of the eastern side of Dunn Field as it's planned.

MR. TYLER: What I was getting to was there was a drainage ditch there and a creek bed there once upon a time or something.

MR. HOLMES: Right, concrete lined.

MR. TYLER: Right and that wasn't part of the natural creek bed. That was just a man-made bed.

MR. HOLMES: Probably at one time it probably was a natural drainage that they decided to go ahead and put concrete. I'm not sure, but I would imagine it was.

MR. TYLER: Because I know the gun range was not too far from where they're cutting the street in.

MR. HOLMES: I think the gun range is -- well, it's gone.

MR. TYLER: It was a drainage ditch.

MR. HOLMES: Wasn't it in here or something (Indicating)?

MR. BALLARD: No, it's further.
MR. HOLMES: So it's not where the street is going in, but it is part of the area that's been released because it's been cleaned up.
MR. TYLER: Thank you.
MR. WILLIAMS: Okay, anyone else? Okay I guess we'll move right along with the agenda.

BASE REALIGNMENT AND CLOSURE CLEANUP TEAM

MR. WILLIAMS: We're going to have Mr. James Morrison. Mr. Morrison.
MR. MORRISON: Jim Morrison. Tom actually covered most of everything that we went over today in the BCT meeting. However, there are a couple of areas that I will brief you on. I will only go over what he didn't cover.

One of the things is the source area RD. We're getting to the phase where the Intermediate Remedial Design--60 percent phase was to come out in June. It's going to be postponed until September. They're looking at optimizing the soil vapor extraction system with what's called a membrane interfaced probe (MIP). The MIP is able to find and delineate soil contamination hot spots. This approach is being used in order to optimize the soil vapor extraction system. Instead of doing an area wide soil vapor extraction, we're going to target areas that are highly contaminated. Since the loess is a very tight formation, you want to make certain that you're getting as much contamination out as possible, for the money it costs to implement this remedy.

Tom also talked about the off-Depot RD earlier. This RD addresses the contamination under the power station to the northwest of Dunn Field. This is also in progress.

The off-site northeast plume from Dunn Field, the ground water contamination that is coming onto Dunn Field from an offsite source is sweeping across the very northern end of Dunn Field and then back off the facility is being addressed in cooperation with EPA and TDEC in what is called the Preliminary Assessment and Site Investigation Program (PA/SI).

Tom also went over the disposal sites removals. Five sites were being removed. (Indicating) Three of them were

successful. Confirmation samples from two of the sites indicated further action was needed.

The Early Implementation: Tom also discussed that. The Interim Remedial Action (IRA) System Status is how it is referred to. The IRA is the boundary / extraction wells that are along the western boundary of Dunn Field that produce a hydrologic barrier to contain the ground water. All wells are running now. We have had problems in the past with these wells shutting down, but now all wells are running, and we've got an effective hydrologic barrier.

Just to follow up on something Turpin was talking about earlier. There is still a misperception about contaminated groundwater and drinking water. Yes, we still have contaminated groundwater at the Depot, and that is one of the issues we're addressing on the off-site portion of the plume. The soil vapor extraction (SVE) is to treat the remaining contamination in the unsaturated zone at Dunn Field. Fluvial groundwater is going to be treated with zero-valent iron injection zones, a permeable reactive barrier, and Monitored Natural Attenuation.

If your community members come and say to you, “my water is smelling funny or it tastes strange or something”, please explain to them that it is not due to groundwater contamination at the Depot. While it is true the groundwater is contaminated at the Depot, it is not the same water MLGW uses to furnish drinking water to homes in Memphis. The water contaminated by the Depot is located in the upper fluvial aquifer. MLGW gets their water from the Memphis Sand aquifer, located much deeper in the subsurface.

MLGW water goes through multiple tests, multiple aerations, and then is distributed to MLGW's customers. MLGW water is not the same water that's is contaminated here at the Depot. It comes from two different groundwater sources. You may have water that may come from as far as five to ten miles away. That water is then mixed with other water within their water system, and gets placed into their distribution system. MLGW water then goes through miles and miles of water pipe and comes into people's homes. TDEC has found that it is usually the water pipes in your home, especially if you're living in older home that causes drinking water to smell funny. Again, it is not a result of

the groundwater contamination at the Depot. The water provided by MLGW and ground water contaminated at the Depot are totally different sources of water. I hope my explanation has helped to clarify this issue.

We also discussed today a cursory schedule of events and how things are scheduled to go over the next year. The implementation of the remedies will be going on over the next few years and out to 2009.

Our next BCT meeting will be coming up in June, and those are the issues we talked about during the BCT meeting.

MR. WILLIAMS: We're going to go to the RAB comment period, but I would just like to make a correction on this agenda that I had said his name was James, but his name is Jim. So I'd like to make that correction so when you do the minutes that it will reflect that.

RAB COMMENT PERIOD

MR. WILLIAMS: Okay, we'll go to the RAB comment period. I wanted to ask Alma, is it possible to send a letter to the rest of the RAB members expressing how important it is for them to be here, that we really missed them at this meeting, if you could?

MS. MOORE: You and I can get together. You call me when it's convenient for you, and I will be sure to send it from my office.

MR. WILLIAMS: Okay, I appreciate that, and I'll do that.

MS. PETERS: Mondell, she called all the members.

MR. WILLIAMS: Yes, but I wanted to send a letter to them to let them know that we really missed their presence here, and this is important, and we have the concerns of the community at hand, and we need them here to make sure that they can share this information with the community that they represent, and that's the reason we are here. Mr. Tyler?

MR. TYLER: I don't see nothing wrong with a little friendly reminder, provided the government pays the postage.

MS. MOORE: I will make sure that we pay the postage.

MR. TYLER: Now, as a friendly reminder. One question to Mr. Morrison, you said something about bang for the bucks in hitting the hot spots.

MR. MORRISON: Yes.

MR. TYLER: To me that sets off a red flag. Is there a shortage of money or are you watching the money or are you controlling the

money? You know, the bang for the bucks meaning -- I understand what you're saying. We're talking about misinformation around here. So we don't want to give the community the mold or the mind set that well, we're going to hurry up and rush this thing through. We found something that we can (unintelligible) or we can take our time.

MR. MORRISON: That's not what I meant by that at all. In the worst spots there is a very tight sediment area layer. Contaminants tend to bunch up as they are released. They tend to -- let's say if they were put into a burial pit, and if you have a drum or something to breach, that contamination is going to be essentially located proximal to the release point and directly under it. You may have some horizontal migration, but not much. Most everything is going to be going downward right there.

So if you're wanting to optimize your system, you want to find out -- you don't really want to put -- if you know you've got a burial site here (indicating), you would rather concentrate your extraction points very close to that to optimize any that's out -- as a matter of fact, it would make it a shorter remediation period you're getting, and that's what I'm saying. You're getting more bangs for the buck. It's targeted here, and that's where the contamination is. That's what you want to do, and it makes more sense than putting something here, putting something out here, putting something over there, and if you don't target this, it's going to take a much longer time and the cost will just go up. (Indicating)

That's what I'm talking about when I say "bang for the bucks." It's not that we're not doing this out here. It's just that we want to make certain that we get it.

MR. TYLER: One other question. I understand your methodology. However, if you were to do it as previously said, you know, as you previously stated, then it would spread out, you know, the contaminants the way you had them?

MR. MORRISON: No. Everything -- when you have a release point, the contamination is going to be proximal to the release area. What I was saying about spread out, if you put in an extraction point here, an extraction point over here and you're not focusing on where the problem is, it's just going to take a much longer time to remove the mass that you needed to remove.

MR. TYLER: Would that be more thorough in that approach because you've got a larger area that you're trying to clean up?

MR. MORRISON: No.

MR. TYLER: The science states that. That's what I'm trying to get at. You know, rather than trying to concentrate on saving money, we want to say the scientific process is much better if we concentrate on the hot spots.

MR. MORRISON: Yes.

MR. TYLER: Closer to it, and what about those boarder line spots, you know, like you might be right at the guidelines?

MR. MORRISON: Go ahead.

MR. BALLARD: The Record of Decision established the cleanup levels with the soil.

MR. TYLER: Okay.

MR. BALLARD: And when we think we've sucked out enough contamination that we're close to the cleanup levels, we're going to take soil samples. You know, we'll be monitoring the vapor that we're drawing out all the time, and when the concentration of contaminants in the vapor reaches a very low point and stops going down, really, we'll start taking soil samples from soil borings to sort of get the ground truth of what's in there, and the area of contamination will have to be within that at or below the cleanup levels or the remediation has to continue.

So, when you talk about marginal areas, the margin is defined by the cleanup levels, and the remediation continues until you achieve the cleanup level. The cleanup levels are meant to be protective of groundwater from the rainwater passing through it and reaching contamination further down.

When we get below a certain level -- when we reach the cleanup levels, we won't be reaching any more contamination in the groundwater that will exceed the drinking water standards.

MR. TYLER: In lay terms, you want to contain and stabilize the contaminants below EPA levels.

MR. BALLARD: Yeah. We want to clean them up to below the levels.

MR. TYLER: That's what I said, below the EPA levels, control and contain the levels.

MR. BALLARD: Well, it's a terminology issue here we're talking about. Containment means it's going to stay there; we're just not going to let it go any further. Cleanup level means we're going to actually pull it out, take the contamination out of

the ground until what's left is at a point that won't be a threat to the groundwater or to human health.

MR. TYLER: All right, and then you're going to monitor to make sure it doesn't reappear.

MR. BALLARD: For a period of time, yes. But once you clean up -- this is why we're taking these different approaches to the remediation. We're treating the groundwater. We're treating the soil. When we reach the cleanup levels, we may have a short -- for soil and groundwater within the entire area of contamination, we're pretty much done. There may be, you know, another couple of sampling rounds to verify that we still have, you know, the cleanup in all areas, but there will come a time when we'll be done monitoring for the groundwater contamination, but the land use control monitoring is going to go on into the unforeseeable future.

MR. TYLER: Basically, what I'm trying to say is that once you stabilize the contaminants and get them below EPA levels, then we monitor them for, what, three to five years?

MR. BALLARD: Probably for -- I can't remember off the top of my head. It's either three or four consecutive sampling rounds, not years, but it could be -- probably a half year, every half year, you know, three or four consecutive rounds where all wells are clean.

MR. TYLER: That's what I was trying to get out.

MR. BALLARD: There is -- in the Record of Decision, if you'll go back and look at it, it sets forth -- it sets out a how clean is clean section, what the compliance scheme is for determining when we're done.

MR. TYLER: Excuse me. I got confused. I know we're supposed to keep this process going for up to five years. I'll double check the records and be clearer on my facts. Sorry.

MR. BALLARD: Feel free to call if you're unclear on anything at all.

MR. TYLER: I'll look at the RAB website.

MR. WILLIAMS: Anymore comments from the RAB? (Brief pause.)

PUBLIC COMMENT PERIOD

MR. WILLIAMS: At this time I guess we'll open the floor up to the public, and if anyone would like to speak, please stand, speak your name very clearly so the transcriber can get your name completely, and you are more than welcome to speak, and the mike is up front. (Brief pause.)

MR. WILLIAMS: So if there is no one to speak, would anyone like to make a motion? Mr. Tyler.

MR. TYLER: I would like to thank the chairman for doing a great job under difficult circumstances, and keep up the good work, and try to send that letter out and be as friendly as possible, and I make a motion to adjourn.
MR. WILLIAMS: Can I get a second?
MS. PETERS: Second.
MR. WILLIAMS: All in favor?
THE BOARD: Aye.
MR. WILLIAMS: Any opposed? (Brief pause.)
MR. WILLIAMS: Abstained? (Brief pause.)
MR. WILLIAMS: Take care.

(Whereupon, at approximately 7:15 p.m. the meeting was adjourned).

NEXT MEETING: ***
6:00 P.M.

Attendance List

Restoration Advisory Board Members

Mr. Mondell Williams Community Co-Chair
Mr. Mike Dobbs Interim Facility Co-Chair
Mr. Turpin Ballard Environmental Protection Agency
Mr. Jim Morrison Tennessee Department of Environment and Conservation
Ms. Johnnie Mae Peters Citizen Representative
Mr. Stanley Tyler Citizen Representative

Others in Attendance

Ms. Alma Black Moore Frontline Communications
Mr. Tom Holmes MACTEC